BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Co-Channel Protection Criteria for Part 90, Subpart S Stations Operating Above 800 MHz	)	**PR Docket No. 93-60** **RM-8028**

To: The Commission

COMMENTS OF THE TEXAS UTILITIES ELECTRIC COMPANY

The Texas Utilities Electric Company, sometimes hereinafter referred to as "TU Electric" or the "Company", by its attorney, pursuant to the Notice of Proposed Rule Making ("Notice") adopted in the above-referenced proceeding, respectfully submits these Comments for consideration by the Federal Communications Commission.1/

I. PRELIMINARY STATEMENT

1. TU Electric is one of the largest utilities in the nation, providing electric service to approximately one-third of the state of Texas, an operating territory covering 88,000 square miles, or roughly the same area as the state of Florida. Within this expanse, TU Electric serves 5.25 million people encompassing 87 counties and 372 cities -- a population approximating that of the entire

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1/ Notice of Proposed Rule Making (FCC 93-140), released April 7, 1993, 8 FCC Rcd 2454 (1993).

Commonwealth of Virginia. The Company operates 66,000 miles of distribution lines, 12,000 miles of electric transmission lines; and 2,100 miles of natural gas transmission lines.

2. Private land mobile radio operations in the frequency bands above 800 MHz are a critical element of TU Electric's ability to safely and efficiently operate its extensive facilities. The Company is implementing a major 900 MHz mobile radio system that will serve as the backbone for advanced communications technologies. Reliable mobile radio communications are absolutely essential to enable the Company to quickly respond to electric outages, especially considering the high level of coordination needed between lineworkers and the operations center to assure safety during emergency response operations. The Company's lineworkers often maintain and perform repairs on transmission facilities carrying hundreds of thousands of volts.

3. The maintenance of public safety and order throughout TU Electric's service area largely depends on the Company's ability to provide reliable service to its customers, which include hospitals and state/local public safety agencies. TU Electric, therefore, requires absolute reliability of communications for the efficient restoration

of service, as well as the safety of its employees and the public.

4. To assure reliable land mobile communications into the next century, the Company is now implementing a 900 MHz land mobile system to cover its entire operating territory. Given that this Notice proposes revised co-channel separation standards for the bands above 800 MHz, TU Electric has a strong interest in the issues raised in this proceeding. Indeed, the Company has a record of participation at the FCC on issues impacting the short-spacing of private land mobile systems. Specifically, on August 12, 1992, TU Electric filed a Statement in Partial Support of the Petition for Rule Making (RM-8028) submitted by NABER which initiated the instant notice and comment proceeding. In that Statement, TU Electric supported NABER's recommendation that a 40/22 dBu co-channel interference protection standard be established for 800/900 MHz channels in the Business and General Categories, and the Company urged the Commission to extend the same standard to channels in the Industrial/Land Transportation category.

5. In the Notice, the Commission seeks to provide non-SMR applicants and licensees the same higher level of

co-channel interference protection (the 40/22 dBu standard) that the Part 90 rules currently afford to SMR licensees and applicants. The proposed 40/22 dBu Table is calculated on the non-overlap of the 22 dBu interference contour of the proposed station with the 40 dBu service contour of the

trunked systems. Accordingly, employing one interference standard for a portion of the assigned channels, and another standard for the recommendation of additional channels, would cause unnecessary confusion and administrative difficulties in both the coordinators' and the Commission's processing of intercategory sharing applications.

7. TU Electric supports the Commission's proposal that non-SMR stations be protected from co-channel licensees or potential applicants on the same basis as the rules currently protect SMR stations. The Company is gratified that the proposed Table provides protection to existing stations based on their actual operating parameters. The Company believes that this proposal represents a fair balance between the desire of potential applicants to short-space currently licensed facilities, and the desire of existing licensees to assure the operational reliability of their licensed systems. In this regard, TU Electric supports the Commission's proposal that 50 miles be the minimum separation distance that will be authorized for short-spaced stations, regardless of the station's operating parameters.

8. The Commission's proposal also addresses technical issues that govern the calculation of co-channel mileage

separation values. Of primary interest to TU Electric, the Commission seeks detailed comments on whether the agency's traditional use of the R-6602 propagation prediction methodology is generally adequate, or if some other methodology, such as the Longley-Rice/TechNote 101 (National Bureau of Standards) computer prediction model or the Hata model, would be more suitable for typical land mobile propagation predictions.

9. In the Company's experience it has found that the R-6602 methodology often poorly predicts actual propagation in the irregular, hilly, terrain of central Texas. The R-6602 methodology is highly generalized and relies on a "flat-earth" model of RF propagation. Use of the methodology often results in extremely smooth, rounded contours, regardless of the nature of the intervening terrain, or environments that may be conducive to long-distance propagation. Consequently, the R-6602 standard inadequately protects existing co-channel systems from those applicants that may seek to "engineer-in" new systems. TU Electric believes that the so-called TechNote 101 methodology, based on the more accurate Longley-Rice RF propagation model, is superior. TU Electric, therefore, urges the Commission to explicitly adopt the TechNote 101 methodology as the more accurate propagation model.

10. The relatively simplistic R-6602 methodology may adequately serve the Commission's purposes in regions of the mid-western and eastern United States where the terrain is indeed flat. However, a serious concern with obtaining realistic co-channel separation standards, while still preserving an opportunity to authorize "engineered-in" stations on a practical, not theoretical basis, should lead the Commission to adopt the TechNote 101/Longley-Rice model as the methodology for describing the true service area of systems operating in hilly terrain such as that found in central Texas.

11. TU Electric's 900 MHz private land mobile system represents an expensive and very significant infrastructure investment for the Company. The Commission's continued utilization of the R-6602 propagation methodology, the use

WHEREFORE, THE PREMISES CONSIDERED, the Texas Utilities Electric Company hereby respectfully submits the foregoing